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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dongming Zhu

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EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No. 09/904,084	Applicant(s) ZHU ET AL.
Examiner Paul Marcantoni	Art Unit 1755

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 27 April 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:


Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-33

Claim(s) withdrawn from consideration: _____

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s): _____.
10. ☒ Other: see attached sheets


Paul Marcantoni
Primary Examiner
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Applicant's arguments filed 4/27/04 have been fully considered but they are not persuasive.

The following below is the actual final rejection mailed 3/15/04:

Applicant's arguments filed 2/4/04 have been fully considered but they are not persuasive.

Prior Art Rejection:

The prior art rejection over Fehrenbacher (US Patent No. 3,634,113) has been withdrawn because this reference does not teach any of the claimed Group B dopants for applicants' instant invention.

The applicants' amendment of claim necessitated the new grounds of rejection below:

35 USC 112 Second Paragraph:

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Claims 1-33 are indefinite, especially with respect to all independent claims (e.g. for example see claims 1, 8, 16 as well as new claim 32), as there is no distinction between the primary stabilizer which can be a rare earth oxide such as dysprosium oxide or erbium oxide, the group A dopant which only needs to be a rare earth oxide, and group B dopant which contains other rare earth oxides. How does one distinguish between 2 or 3 of these components if they are the same? It would not appear to make sense in that regard. There is nothing in the claims (independent) from showing that at least the rare earth oxides used are different.

Applicants should amend their claim so there is no vagueness with respect to which rare earth metal oxides are the primary stabilizer, group A dopant, and group B dopant. By showing that they are all different rare earth oxides for each of these three groups is how applicants should overcome this rejection.

The applicants' amendment also necessitated the following new grounds of rejection:

New Matter:

Claims 1-33 are rejected under the first paragraph of 35 USC 112 and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

The newly added negative limitations added to claims 1, 8, 16, and 32 (independent claims) of "but excluding those species contained in said base oxide, group B dopant and primary stabilizer groups is new matter. There is no support for defining the group A dopant which consists of rare earth metal oxides by further adding a negative limitation to exclude the base oxide, group B dopant and primary stabilizer groups.

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While the examiner said the independent claims were also vague as there was no way to distinguish the rare earth metal oxides of the various component groups (primary stabilizer, group A dopant, group B dopant) and said they should amend their claim to remove the vagueness, it was assumed that applicants actually had support for any amendments they made. Yet, they do not have support for excluding the other components in an effort to further define the group A dopant.

The applicants also had a telephone interview with the examiner and indicated that the examiner agreed that their amendment would overcome the 35 USC 112 second paragraph rejections. It was also implicit in the examiner's agreement that applicants actually had support from their original disclosure for negative limitations or language further defining the group A "excluding" the other rare earth oxide components. Yet, applicants do not have support for this negative limitation and it is thus new matter.

It is the examiner's position that even if the applicants were able to remove the new matter, it does not resolve the indefiniteness issue because there is still no way to distinguish between the primary stabilizer, group A dopant, and group B dopant. Applicants may consider filing a CIP to add language to their disclosure which allows for claims that define the group A dopant by "excluding" the other rare earth oxides. It does not seem there is any way to overcome this problem in the original disclosure.

Nevertheless, the applicants' amendments necessitated these new grounds of rejection and the finality of this office action is now proper.

*Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).*

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Applicants After Final Remarks:

The applicants traverse the examiner's rejections because they argue that they have support for the negative limitation "but excluding those species contained in said

base oxide, group B dopant, and primary stabilizer groups" to distinguish from the group A dopant.

As evidence, applicants point out that on page 5 of the specification, it states:

The radii of cations of the group A dopant oxide *preferably* are smaller than the radii of the cations of the primary stabilizer and/or base oxide.

The radii of cations of the group B dopant oxide *preferably* are larger than the radii of the cations of the primary stabilizer and/or base oxide.

The applicants argue that if the group A dopant cation radii are smaller than the primary stabilizer and base oxide cation, then clearly the group A dopant is not the same species as (ie excludes) the base oxide or the primary stabilizer. In rebuttal, the examiner disagrees. The applicants argument fails because they argue without including the word "preferably". Had the statements above not had the word preferably at all, the applicants' arguments would be convincing. However, the word "preferably" unfortunately cannot be ignored. In other words, the cations radii of the group A dopant are *preferably* smaller than cation radii of primary stabilizer and/or base oxide but certainly it does not have to be or must be smaller. Preferably in this statement means the group A dopant oxide can have the same size cation radii.

The applicants are also referred to page 4, lines 16-17, wherein it states that the group A dopant can be "less preferably any other rare earth oxide". This means that even though not preferred the group A dopant can be virtually any other rare earth oxide and this includes yttrium oxide and dysprosium oxide which happen also to be rare

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earth oxides. In other words, the applicants own specification supports the position that the group A dopant and the primary stabilizer can be the same. This is evidence refuting applicants' negative limitation that they have support for excluding a group A component from other components such as the primary stabilizer. They can be the same.

It is agreed that applicants have support for excluding erbium oxide but that still does not overcome the statement that the group A dopant can be "less preferably (but still be) any other rare earth oxide which includes the other rare earth oxides of the primary stabilizer such as yttrium oxide or dysprosium oxide.

The applicants argue that the cationic radii of the group B dopant oxide are larger than the cationic radii of the base oxide and the primary stabilizer, then inherently it follows that the group B dopant must be a different species (ie excluded from) the species of the group A dopant. Again, the applicants' argument fails because they argue without including the word "preferably". Had the statements above not had the word preferably at all, the applicants' arguments would be convincing. However, the word "preferably" unfortunately cannot be ignored. Preferably means that the group B dopant oxide cation radii can still be the same size as the cation radii of the primary stabilizer and/or base oxide. Again, the statement that the group A dopant is less preferably "any" other rare earth oxide means that it can be exactly the same as the group B rare earth oxides and thus the same compound! The group A dopant can be the same as the group B dopants of neodium oxide, gadolinium oxide, samarium oxide, and europium oxide because they are all rare earth oxides. Thus, it can be seen that

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applicants do not have the support for excluding the group A dopant from the primary stabilizer, group B dopant, and base oxide and their negative limitation using "excluding" language remains new matter and neither does not resolve the indefiniteness issue raised under 35 USC 112 second paragraph.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373 or if unavailable to his SPE Mark Bell at 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
Art Unit 1755